

AN INVESTIGATION OF THE
RELATIONSHIP BETWEEN CREATIVE
HUMOR AND AUTHORITARIANISM

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CHAPTER I

INTRODUCTION

Background of the Problem

Scholars representing many disciplines, from Plato to the present, have written about humor. The word "humor" is sometimes used in a limited sense, as in Freud's (23) distinction between wit, humor, and the comic. But except where otherwise indicated, the more general meaning of the word is intended in this paper. Humor has had many definitions, but most writers would agree that they are attempting to understand that quality or aspect of behavior and experience which mediates the amusing, the laughable, or the funny. Most investigators have also noted that humor usually involves, either singly or in combination, the playful, the surprising or unexpected, and the expression of emotional or instinctive tendencies. Determinants of humor appreciation and the humor response have been recognized as being related to an individual's intimate needs and feelings, yet, at the same time, continuously influenced by the social environment.

Since this quality called humor is so pervasive in human behavior, it would seem to offer a strategic base from which to explore the relationships among our emotional,

intellectual, and social selves. Yet relatively little research on humor has been attempted by psychologists. Philosophers have provided insightful descriptions and speculations but scientific measurement has lagged. Except for the efforts of a few pioneers such as Martin (40), who devised a rating scale for jokes in 1905, most of the experimental work on humor has been done within the last twenty years. Even the research that has been done has not been assimilated into psychology as a whole. With a few exceptions, textbooks on social psychology, clinical psychology, or even personality theory limit their discussions on "sense of humor" to a sentence or two attesting to its importance.

There are several possible reasons for the limited production of research on humor and for the failure of textbook writers to discuss the subject. One is that the very quantity of allegedly humorous material to which we are exposed daily may well stimulate an avoidance reaction in persons interested in scientific inquiry. It is also true that humor is a rather nebulous concept, the relationship of which to personality and to behavior is both subtle and complex. Measuring devices are difficult to construct and standards of excellence are hard to define. As in studies of music, the prolonged exposure necessary for analysis often destroys the unique but elusive qualities one seeks to understand.

Several advances in humor research have been made in recent years. Factor analysis has been utilized in an attempt to bring order and psychological meaning to the common sense classifications of humor. Recent investigators have tended to avoid narrow theories and have shown a greater awareness of the breadth of the problem and an appreciation of the fact that not one, but many solutions will eventually be needed.

Theoretical Orientation of the Present Study

One of the limitations in some of the previous research has been that the study of humor has been subordinated to some other goal. Examples are a study of the effectiveness of humor in persuasive speech (37), and a humor test which contributes to a score in "social intelligence" (41). One "humor" test (9) merely uses joke preferences as a device for securing measures of other aspects of personality, such as sex interest or hostility. Although "applied humor" studies are of interest, they do little to cast light on the nature of humor itself.

Probably the most striking deficiency in studies of humor has been their almost exclusive concern with appreciation, rather than the creation, of humor. Most experimenters have had subjects indicate their preferences for jokes, limericks, and the like, by ranking or rating. Another

technique requires subjects to choose the "funniest" of five endings to a joke (41). Eysenck (20, p. 225) is one of the few writers who has recognized that there are clearly two factors involved in "sense of humor," namely, "appreciation and production." He states that his studies with the production of humor have not yet yielded definite enough results to warrant publication.

Another weakness of previous investigations of humor seems to be an overemphasis of humor as an index of possible psychopathology. This is especially true in psychoanalytically oriented studies, although Freud (23, p. 802) himself recognized "harmless" as well as "tendency" wit and described humor as "the loftiest of the defense functions." Viewing humor as a useful defense function, rather than as a symptom of conflict, seems a step in the right direction. But humor's positive, creative, function as an agent in "superior adaptation" has received little recognition.

Some general problems concerning techniques and emphases in humor research have been discussed. The present study does not attempt to suggest what should be the goals in future research. However, it is thought best to point out that the aims and the plan of the present study developed, to a large extent, in reaction to some of the previous emphases. First, interest is centered on the creation

of the humorous responses themselves, rather than on what hidden meanings they may contain or how others will react to them. This orientation leads, then, to the question of individual differences--not in appreciation of humor--but in the production of humor. Why are some people successful users of humor and others not? The present study also attempts to avoid the bias of viewing humor primarily as an expression of psychological conflict. Freud (23, p. 760) stated that the importance of unconscious tendencies might explain "why the subjective conditions of wit are so frequently fulfilled in the case of neurotic persons." It is hoped to present evidence in this study suggesting that these conditions may just as frequently, or more frequently, be fulfilled in the case of the psychologically healthy person.

Overall Plan for the Experiment

The problems pertaining to humor research discussed thus far are broad and complex. They will be documented and discussed in more detail in the review of the literature. The reactions on methods will present the complete experimental procedure. However, the general approach will be briefly described at this point.

It was desired to relate the ability to be humorous to individual differences in personality. First, it was decided to limit the subjects to male, college undergraduates

since most of the related research had utilized similar groups. For the measure of humor "production," a test consisting of eight incomplete cartoons was constructed. (The humor test is reproduced in Appendix I.) The cartoons depicted familiar campus situations in which one student is saying something to another. The subject is asked to fill in a humorous reply. The personality measure selected was the California F (fascist or anti-democratic) scale, or "authoritarianism" scale (1, p. 255). This scale was chosen because of the many studies suggesting that the F scale measured several personality variables suspected of being crucial to the production of humor.

A total of 188 male subjects, college undergraduates, were given the humor test to complete, followed by the F scale. Sixty subjects were then selected on the basis of their F scale scores: the 20 scoring highest (most authoritarian), the 20 scoring lowest, and the 20 "mid-most" in the distribution. The cartoon responses of these 60 subjects were then rated for funniness by a group of seven judges. The results of the humor test, as related to the F scale classifications, constitute the principal findings.

CHAPTER II

REVIEW OF THE LITERATURE

Humor

The studies on humor to be reviewed will be classified under four general headings: the philosophers and humor, phylogenetic theories, psychoanalytic theories, and experimental studies. The major emphasis will be placed on the experimental studies. This group is felt to have made the most significant contributions, not only because of their methods, but because their studies have been the most recent and they have been in a position to bring together and test some of the earlier theories.

The Philosophers and Humor

Plato, in the Philebus (46, p. 339) noted that, ". . . when we laugh at the ridiculous qualities of our friends, we mix pleasure with pain, since we mix it with envy" The emphasis is on laughter as a subtle way of attacking those whom we feel may be superior to us. Aristotle (5, p. 1449a) however, believed that, "The Ridiculous may be defined as a mistake or deformity not productive of pain or harm to others." This definition is probably the first exposition of the idea that humor in its

purest form is not hostile. Spinoza (55, p. 217) also recognized this difference. He stated, "I make a great distinction between mockery . . . and laughter; for laughter and merriment are nothing but joy" Kant (33, p. 223) felt that humor could be understood in terms of physiological functions. He stated, "In the case of jokes (the art of which, just like music, should rather be reckoned as pleasant than beautiful) the play begins with the thoughts which together occupy the body, . . . and as the understanding stops suddenly short at this presentment, in which it does not find what is expected, we feel the effect of this slackening in the body by the oscillation of the organs, which promotes the restoration of equilibrium and has a favourable influence upon health."

A more sophisticated theory of humor was set forth by Schopenhauer (52, p. 279). He suggested that laughter results from the apprehension of an incongruity in which perception triumphs over thought. "[Perception] . . . is the medium of the present, of enjoyment and gaiety, moreover it is attended with no exertion. But [thought] . . . is the vehicle of our fears, our repentance, and all our cares. It must therefore be diverting to see this strict, untiring troublesome governess, the reason, for once convicted of insufficiency."

Kline, a psychologist who contributed to the

philosophy of humor, revealed a still broader understanding of humor in noting that humor is a social process and that it is also characterized by the element of freedom. He states (34, p. 438), "Perhaps its [humor's] largest function is to detach us from our world of good and evil, of loss and gain, and enable us to see it in proper perspective. It frees us from vanity, on the one hand, and from pessimism on the other by keeping us larger than what we do, and greater than what can happen to us."

Phylogenetic Theories of Humor

Rapp (47, p. 21) states that wit and humor can be traced to the primitive scene where the victor uttered a "roar of triumph" over the vanquished. He assumes that laughter at persons preceded laughter from riddles or jokes, and that laughter of ridicule preceded humane, genial laughter. He suggests that social training has caused laughter or humor to be substituted for overt aggression. McComas (38) has also suggested that laughter may have developed before language, as a reaction to a find of good food or a fresh spring. These authors have "explained" laughter by considering it an instinctive reaction. Freud (23, p. 733) also utilizes this approach when he suggests that laughter may develop from the contortions of the corners of the mouth of the "satiated nursling when he drowsily quits the breast."

Eastman (16) has recognized that theories which reduce laughter to an instinct have difficulty in accounting for the wide variety of situations that can lead to humorous responses. Eastman explains adult humor as developing, through learning, from childhood play. He refers to McDougall (39) for support in his opinion that play is a form of instinctive behavior. Eastman also recognized Freud's "tendency" wit, or "furtive" wit, as Eastman calls it. It should also be noted that Freud (23, p. 634) accepted the definition of wit as a "playful judgment."

Psychoanalytic Theories of Humor

Freud's observations on wit, the comic, and humor were insightful and comprehensive. He is probably best known for his emphasis on "tendentious" wit, or wit which serves to release repressed unconscious impulses, usually sexual or hostile. He pointed out that some jokes are similar to dreams or "slips of the tongue" in this respect. Freud also recognized "non-tendentious" or "harmless" wit but had little to say about it.

Freud's attempt to explain the unique qualities of humor resulted in the formulation of his principles of "economy." He stated that the pleasure of wit originates from an economy of expenditure in inhibition, the pleasure of comic from an economy of expenditure in thought, and the pleasure of humor from an economy of expenditure in feeling.

(23, p. 802). These three divisions are suggestive, respectively, of the conative, cognitive, and affective divisions later applied to humor by Eysenck (20, p. 227). However, Freud's terminology of "economy of expenditure" has not been widely accepted, subsequent writers preferring to attribute the pleasure to the expression of repressed tendencies and the release of the energy used in repression.

Freud's frequently quoted distinctions between wit, the comic, and humor do not seem entirely satisfactory. For instance, he gives the following example as a combination of the comic and wit (23, p. 763). A little girl who was suffering from a severe cold and sneezing profusely, pointed to her chest and said, "Daddy, Gesundheit hurts!". Since our sympathy for the child is both mobilized and released, this remark could also be interpreted as humor, according to Freud's doctrine of "economized feeling."

In 1928, Freud (24) published his theory of humor making use of the superego, a concept which had not been formulated at the time of his book on wit. This concept states that the ego adopts the point of view of the superego and is able to look down on its difficulties with more mature understanding and detachment.

Freud's contributions to an understanding of humor have markedly influenced subsequent studies. However, Flugel (22, p. 721) has noted that, "On the whole, . . .

the contributions of the 'metapsychology' of humor by psychoanalytic writers other than Freud himself have not been as convincing, enlightening, or mutually consistent as might have been hoped for in view of the considerable number of papers devoted to the subject." An example of this neo-Freudian approach to humor might be taken from Dooley (14), who states, "Humor thus becomes one of the ways in which the ego . . . 'wangles' restoration of the parents' love by claiming the love of the parents' successor--the super-ego--in playful fantasy. (p. 44).

Experimental Studies of Humor

The experimental investigations will be discussed in approximate chronological order. A study by Landis and Ross (35) illustrates one of the earlier experimental approaches to humor research in which a large number of jokes were classified into categories by judges. In this case a 100 item test was constructed, jokes being classified into the following seven categories (p. 157):

1. Humor of Quantity (exaggerations, under-statement, etc.).
2. Humor of Incongruity (association of incompatibles).
3. Humor of Unexpected (occurrence of some surprising thought, etc.).
4. Humor of Truth (exposure of one's unrevealed thoughts, etc.).
5. Humor of Superiority (difficulties of others which seem simple to us).
6. Humor of Repressions (release of tensions, such as fear, sex, etc.).

7. Humor of Ridiculous (nonsensical use of logic, play or words).

Jokes in these categories were further rated by writers and by editors of a college humor publication as "very good," "good," "poor," and "very poor." Equal numbers from each of these levels were placed in the test.

Subjects, in the portion of the experiment to be discussed, were 124 male undergraduates at a men's university and 154 female undergraduates at a women's college. Subjects were also given an introversion-extroversion scale and intelligence was measured by means of a standard college ability test used for entering freshmen. Subjects were asked to rate each joke on the humor test according to the four-point scale of "goodness," with no limit as to the total number of "humor points" to be awarded. The subjects were also asked to classify each joke according to the seven humor categories. The tests were scored for total "humor points" and for total points assigned to each of the humor categories. Results indicated no relationship between either overall humor points or classification of items with the other measures employed, that is, intelligence, or introversion-extroversion. The authors noted marked individual variations in humor preference and concluded that performance on the humor test behaves as an independent personality factor. It was also noted that the men and women differed significantly in humor preferences; evaluating the

categories from best to poorest in the following order (35, p. 172):

Men: Repression, Unexpected, Ridiculous, Truth,
Incongruity, Quantity, Superiority.
Women: Ridiculous, Incongruity, Unexpected, Superiority, Truth, Quantity, Repression.

The greatest difference is seen in the Repression classification which the men valued first and the women last. This is the classification which includes most of the jokes related to sex.

In criticism of the type of approach used in this study, Cattell (10) has stated, "Valid humor scales cannot be built up by items merely believed from 'inspection' to have a 'homogeneous' content, or even on psychiatric insights of common dynamic content. (Two psychiatrists agree on the dynamic content and item association of a joke scarcely beyond chance.) The jokes that are put on a single factor scale have to be proved by experiment to 'go together' in the choices of the typical subject and to be at the same time substantially independent of the other factor scales" (pp. 3-4).

An example of the inconsistencies that can result from classification by inspection occurs in the Landis and Ross (35) study. The authors noted that some of the jokes that they used were used in a similar study by Kambouropoulou (32). They compared results and found that the relative humor values assigned corresponded closely. However, the

classifications as to the type of humor involved differed considerably.

A study by Sears (54) has been widely quoted, principally with reference to his useful distinction between the schematic and thematic aspects of humor. The former refers to the structure of the joke, including such organizational factors as timing, brevity, or the sudden shift of closure. The latter refers to the meaningful human content, primarily asocial or repressed needs such as aggression, superiority, or sex. Sears also classified his jokes on an a priori basis. His choice of such classifications as "overt anal" and "covert anal" suggests the susceptibility of this approach to theoretical bias.

Gordon Allport's (17) contribution to the literature on humor is more speculative than experimental. However, chronologically, he should be considered at this point, and he does begin his remarks on humor by referring to a study in which ratings of persons for "sense of humor" were found to be correlated $+ .88$ with their ratings for "insight" (p. 220). Details of the experiment were not given.

Allport states that "psychologically it is not profitable to distinguish between insight and sense of humor" (p. 422). He includes both traits under "self-objectification." He rules out of his definition absurdities, puns,

release of suppressed material, and the laughter of good spirits or play. What remains is a highly intellectualized distillate from the broader concept of humor. One might even suspect that Allport has missed the essential ingredient of humor when he states that, "To view one's problems humorously is to see them as trivial and of no consequence" (p. 225). This would appear to be self-deception rather than insight, and it is hardly an adequate evaluation of humor. What Allport, and other writers, find difficult to explain is the special quality of humor which enables a person to laugh when fully aware that a problem is far from trivial. Although Allport's theory appears to be too narrow, it is an important contribution because of his point of view. His emphasis on the positive aspects of humor came at a time when "discharge" and "camouflage" were being overstressed.

A new approach to humor research is represented by the work of H. J. Eysenck, whose major contributions to humor are contained in two articles (18, 19) and in his book, Dimensions of Personality (20). Eysenck is recognized both for his "cognitive, conative, and affective" theory of humor and for his factor analytic approach to the factors in humor. In one study (18), 189 jokes were given to 16 subjects to be ranked. Subjects were also given an introversion-extroversion questionnaire. The humor rankings

were intercorrelated and subjected to factor analysis. The main outcome appeared to be a bipolar factor contrasting persons who preferred rather simple, "funny," sex and aggressive jokes with persons who preferred more complex, "clever" jokes not dealing with sexual matters. Eysenck identifies the first group as orectic (conative and affective) jokes and the second group as cognitive jokes. Correlations showed that extraverts tended to prefer the orectic type of humor while introverts preferred the cognitive type.

Eysenck believes that it is possible to classify all humor under the three main headings of cognitive (incongruity, contrast between ideas, and deceived expectations), conative (satisfaction of the desire for superiority), and affective (emotional aspects). He calls this his "Eclectic Theory of Humor," and illustrates it by means of a triangular diagram (20, Fig. 21, p. 228). The top corner is labeled "Cognition" and the bottom corners "Affection" and "Conation." The two bottom corners are drawn closer together to represent the apparent closer interaction of these aspects of the mind. Any joke can be located within the triangle. As the joke approaches "Affection" it can be described as "humor," as it approaches "Cognition" it is described as "comic," and as it approaches "Conation" it takes on more of the characteristics of "wit." Sear's (54)

"schematic" and "thematic" divisions are similar to Eysenck's "cognitive" and "orectic," while Allport's (2) theory is predominately cognitive.

In a second study by Eysenck (19), 100 normal subjects ranked 250 humorous items grouped into five different tests. Average intercorrelations between subjects were very low, as were the intercorrelations between each subject's performance on all five tests. In other words, there was a surprisingly small amount of agreement as to the relative goodness of the items. It was found, however, that individuals tended to be consistent in the amount of "fun" that they got out of the materials. A person who found many jokes funny tended to find many cartoons and verses funny. Similarly, a person who did not find the jokes funny was equally rejecting of the other humorous materials. Eysenck notes that this affective reaction seems to constitute a genuine personality trait.

Andrews (4) has reported an interesting study which was designed to determine whether or not humor should be considered as a single unit quality of a general nature. Several hundred jokes, puns, limericks, and cartoons were sorted by college students into nine piles, in order of funniness. Twenty-four representative items, covering the entire range of humor values, were intercorrelated and factor analysis carried out until six factors had been extracted.

No general or universal factor was found. The six factors were described as follows:

- Factor (1) Feelings of superiority over persons seen as inferior.
- Factor (2) Escape from, or sympathy for, debauchery.
- Factor (3) Subtlety (puzzlers, or hidden meaning).
- Factor (4) The pun, or play on words.
- Factor (5) Sexual jokes.
- Factor (6) Ridiculous, nonsensical, wise-cracks.

It is interesting to note that these factors can also be grouped according to the classifications of Sears (54) and Eysenck (20). Factors 3, 4, and 6 could be described as schematic or cognitive, and Factors 1, 2, and 5 as thematic or orectic. However, Andrew's factors, like those of other investigators, seem far from satisfactory. There is a great deal of overlapping. For example, a play on words might also be ridiculous and, in addition, carry sexual connotations. Tracing out such connections still leaves us, in Freud's words, with "disjointed fragments which we should like to see welded into an organic whole" (23, p. 637).

R. B. Cattell is another investigator who has done extensive research on humor. In collaboration with Luborsky (11), 100 jokes were rated by 100 young men and women. Factor analysis yielded five general personality factors: (1) good natured assurance, (2) rebellious dominance, (3) sex repression, (4) passive derision, and (5) sophistication.

The last four factors seem to be closely related to factors obtained by previous investigators. The first factor, "good natured assurance," is of interest because it suggests the warm, yet stimulating, affective qualities we often associate with a person who has a "good sense of humor." This aspect of humor seems to have been overlooked in other factor studies.

Cattell has published a humor test (9) which is based on an extensive series of factor analytic studies. This test consists of 76 items (152 jokes, in pairs) for which the subject indicates his preference. Since each pair of jokes has been matched for relative "funniness" on the basis of previous ratings, extraction for individual's "total funniness" score is impossible. The subjects' choices contribute to scores on the following 12 bipolar factors: (pp. 11-13).

- Factor 1. Debonair sexual and general uninhibitedness vs. anxious considerateness.
- Factor 2. Good-natured play vs. dry wit.
- Factor 3. Tough self-composure vs. reassurance in embarrassment.
- Factor 4. Gruesomeness vs. flirtatious playfulness.
- Factor 5. Hostile derogation vs. urbane pleasantness.
- Factor 6. Resignation vs. impudent defiance of decency.
- Factor 7. Cold realism vs. theatricalism.
- Factor 8. Ponderous humor vs. neat, lighthearted wit.
- Factor 9. Whimsical retort vs. damaging retort.
- Factor 10. Mistreatment humor vs. cheerful independence.
- Factor 11. Evasion of responsibility and guilt vs.

anxious concern.

Factor 12. Scorn of ineffectual male vs. rebound
against feminine aggression.

The preceding array of factors vividly illustrates the complexity and subtlety with which the "sense" or "quality" called humor is woven into our personalities. However, reading this list hardly gives one a feeling of "closure," and the question is raised as to whether or not this approach to understanding humor has reached a point of diminishing returns. Apparently a reaction has already set in as Yarnold and Berkeley (58) have reanalyzed some of Cattell's data and have suggested reducing the number of factors to seven.

The four studies which will be reviewed next are relatively recent. They seem to reflect a change in orientation, from attempting to understand and describe humor as a whole, to the testing of hypotheses derived from limited portions of humor theory. Redlich, Levine, and Sohler (48), in a study of reactions to humorous materials of 59 psychiatric patients and 24 normal subjects, made two interesting contributions to technique. First, as stimulus materials, they used 36 cartoons depicting different objects of aggression and distortion. The authors found that cartoons were more quickly and easily responded to than were verbal materials. Second, in addition to having subjects sort the cartoons according to their likes and dislikes, the authors

rated the subjects' overt reactions to the cartoons according to a "mirth response scale." These ratings were taken unobtrusively and noted the degree of apparent mirth from "no response" to "laughter." The results of this frankly exploratory study were not conclusive with respect to differences between groups. However, the depressed patients reacted as expected, with little or no overt response. Schizophrenics tended to miss the point and exhibit "parahumor." The method was described as being a promising clinical tool because reactions to the cartoons were observed to be closely related to the dynamics of individual patients.

A later study using the "mirth response scale" was carried out by Berkowitz (6). Forty-four college students were given a group Rorschach test and their protocols scored for hostility. Half of the subjects (praise group) were then given prepared reports reporting favorable performance, while the other half were given unfavorable reports (stress group). Each subject was then asked to sort twelve cartoons into three equal piles, "like most," "like least," and "neutral," and to explain the "point" of each cartoon. Overt reactions to the cartoons were noted on the "mirth response scale." Since judges had previously rated the cartoons for aggressive content, the data could then be analyzed in several ways. The independent variables were the measures of hostility and the stress-praise variable.

The dependent variables were the mirth response score, the cartoon preference (aggressive versus non-aggressive), and the degree of understanding or distortion of the "point" of the cartoons--also rated by judges.

The principal findings were as follows:

1. Subjects in the "praise" group scored significantly higher in "total mirth response" than did subjects in the "stress" group.
2. Average "mirth response" scores were not significantly different for "high hostility" and "low hostility" groups. However, "high hostility" subjects gave significantly more extreme responses (frowns or laughter) while "low hostility" subjects gave more "neutral" or "smile" responses.
3. "High hostility" subjects made significantly more "distortions" than "low hostility" subjects on the "high aggression" cartoons but not on the "low aggression" cartoons.

These results suggest that "tendency" theories of humor cannot assume a simple relationship between the degree of a "tendency," such as hostility, and the degree to which the humor response may be affected. Finding number one appears to give experimental support to the frequently observed depressing effect of anxiety on the ability to respond humorously. However, the findings with respect to hostility suggest that the relationship of anxiety to humor may also be more complex than is apparent under the conditions of the experiment.

Grziwok and Scodel (26), asked 140 male college students to rate a series of 40 cartoons for "funniness." The cartoons were selected from a pool of 250 New Yorker

cartoons which had been placed by judges into the following categories:

1. Humorous effect based on aggression, either explicit or deliberately understated.
2. Humorous effect obtained by a parody on sex.
3. Humorous effect based on the exaggerated or paradoxical use of social stereotypes.
4. Humorous effect based on obvious or striking logical incongruity.

Ten cartoons were selected from each category. The authors state that the first two categories (aggression and sex) can be subsumed under "orectic humor" and the second two categories (social commentary humor and logical incongruity) under "cognitive humor." (Category number three appears to be misplaced in view of the potentially highly orectic nature of cartoons which exaggerate social stereotypes.)

The subjects were also given the Allport-Vernon-Lindzey Study of Values (3) and were asked to write stories for seven Thematic Apperception Test (TAT) cards (42). The TAT stories were scored according to specially constructed scales for degrees of aggressive and sexual content, and, in addition, intraception versus extraception.

The significant results were:

1. S's high in TAT aggression prefer aggressive humor while those low in TAT aggression prefer social commentary humor.
2. With respect to value orientations:
 - a) Aesthetic scale. "Highs" prefer logically incongruous cartoons while "lows" prefer aggressive cartoons.

- b) Social scale. "Highs" prefer aggressive cartoons.
- c) Theoretical scale. "Lows" prefer sexual cartoons.

The authors summarize their results as follows: "In more general terms a preference for orectic humor, as opposed to cognitive humor, seems to be characterized by more fantasy aggression, more extraversion or outgoingness, less preoccupation with intellectual values, and less psychological subtlety or complexity" (26, p. 42).

The above findings are in agreement with Eysenck's (18) finding that introverts prefer cognitive humor while extraverts prefer orectic humor. The results of the Grziwok and Scodel study must be interpreted with caution, however, because only a few of the many comparisons possible are reported as being significant, giving rise to possible sampling bias.

The last humor research study to be reviewed is by Epstein and Smith (17). Their experiment attempted to test the Freudian view that repression favors an appreciation of humor in which the repressed material is represented. The authors noted that previous studies have demonstrated a relationship between manifest hostility, for example, and preference for hostile humor, but have not directly attacked the Freudian hypothesis that repression of a tendency favors its appreciation in humorous form.

The authors measured preference for hostile humor in 32 members of a college fraternity by three techniques: observing S's expressive reactions to hostile and control cartoons, having S rate the cartoons, and having him sort them on a Q sort of funniness. In order to obtain a measure of repression, self-ratings of hostility were compared with average ratings assigned by fellow fraternity members. The S's were thereby divided into insight and repression groups, according to the relative accuracy or inaccuracy of self-evaluation.

The principal findings were as follows:

1. No relationship was found between repression and general preference for hostile cartoons.
2. A significant positive relationship between insight and sense of humor was found, sense of humor being measured by degree of correspondence of S's ratings with group norms.

The negative finding with respect to the hypothesized relationship between repressed hostility and humor is difficult to interpret. The authors suggest that there may be no general relationship. Their findings indicated that the relationship may hold true for cartoons which are the most obviously hostile. The authors also suggest that a relationship might be found if suppression (conscious inhibition) or external frustration of an impulse were investigated rather than repression (unconscious inhibition). This latter possibility is suggested by the frequently noted

interest in sexual jokes of sexually frustrated groups such as adolescents (culturally frustrated) and men in the armed services (geographically frustrated) who are not necessarily repressed.

With respect to the findings of a positive relationship between insight and sense of humor, the authors' measure of the latter should be noted. The accuracy with which the cartoons were evaluated, with respect to group norms, may be largely a cognitive function. In this case, these results would tend to support Allport's (2) equating of insight and humor, at least as far as the cognitive aspects of humor are concerned.

The California F Scale

Since the F scale from The Authoritarian Personality by Adorno, et al. (1) is the personality measure used in this study, it is felt that a brief description of its development, together with a summary of subsequent research with the scale, is desirable.

Research in humor appreciation has tended to be concerned with specific personality traits, such as aggressiveness or insight. However, since creation or production of humor was to be measured in the present study, the question was first formulated as, "What might be the personality characteristics tending to make a person a 'humorist,' or a 'non-humorist'?" It was felt that many personality

traits might contribute: flexibility, insight, empathy, intraceptiveness, and the like. However, it is difficult to find satisfactory measures of these traits. In addition, it was felt that a sense of humor was more likely to depend on a constellation of these traits than on any single trait. Therefore, a global measure was sought which would, in effect, combine measures of the above traits.

The California F scale was selected for several reasons. The development of the test can be traced from the initial attempts to get at personality characteristics underlying racial prejudice and anti-democratic attitudes through the several form changes needed to improve sensitivity and bring the average reliability to .90. Abundant clinical data from the original research, together with many subsequent studies, enable one to judge with some confidence as to what is included in the omnibus term "authoritarianism."

The authors of the scale have suggested that the F scale measures the following nine traits (1, p. 228).

1. Conventionalism.
2. Authoritarian submission.
3. Authoritarian aggression.
4. Anti-intraception.
5. Superstition and stereotypy.
6. Power and "toughness."
7. Destructiveness and cynicism.
8. Projectivity.
9. Exaggerated concern with sex.

The authors point out (p. 262) that these groupings

are a priori aids to discussion only, not clusters in the statistical sense. However, all individual items in the test correlate significantly (average $r = .33$) with the test as a whole. One factor analytic study of the F scale by O'Neil and Levinson (44) revealed four factors, which they named: religious conventionalism, authoritarian submission, masculine strength facade, and moralistic control. Possibly a more adequate conception of what the test measures can be obtained from the findings of subsequent researchers who have correlated the F scale with other criteria. Some of the personality characteristics which have been found to be related to "authoritarianism" are as follows:

1. Intolerance of ambiguity: Jones (31) found that inability to tolerate a high rate of reversal in the Necker Cube was positively related to F scale authoritarianism. Similar results, with various measures of intolerance of ambiguity, were obtained by Block and Block (7), and O'Connor (43).

2. Misanthropy: Campbell and McCandless (8) found the F scale to correlate highly with a scale measuring general dislike of others. Sullivan and Adelson (56) obtained similar results with a scale of ethnic prejudice rewritten so that terms such as "all people" were substituted for minorities originally specified.

3. Anti-intracception: Dorris, Levinson, and Hanfmann (15) found that authoritarians tended to deny self-reference to items after having taken a sentence completion test. Jones (30) and Scodel and Mussen (53) have found authoritarians less capable of judging the psychological and personality characteristics of others.

4. Dogmatism: Rokeach (49) constructed a "Dogmatic Personality Scale" composed of statements concerning over-identification with a cause, and the like, that correlated .67 with the F scale.

5. Intelligence: Hollander (29) studying Naval Aviation Cadets, found that intelligence as measured by the A. C. E. test correlated $-.21$ with the F scale. Adorno, et al. (1, p. 283) report an r of $-.32$ for the F scale with the Otis Higher Form A Intelligence Test, in a group of veterans applying to the U. S. Employment Service.

6. Concern with aggression: Sanford and Rosenstock (51), using responses to cartoons, found authoritarians gave more extrapunitive and intrapunitive replies, hence were overconcerned with aggression.

It is evident that the personality dimension tapped by the F scale is broad and complex. Gregory (25, p. 642) has observed that the "authoritarian personality" might better be thought of as "personality syndrome x which has sometimes been called authoritarian." However, inspection

of the six traits discussed above does suggest that they tend to fall into two groups, as follows:

Misanthropy	Intolerance of ambiguity
Anti-intracception	Dogmatism
Concern with aggression	Intelligence (negative correlation)

It will be observed that the first group could be classified as orectic traits (conation, affection) while the second group are cognitive traits. In view of these findings it might be meaningful to think of F scale "authoritarianism" as being characterized, affectively, by hostility and intellectually, by rigidity.

Additional evidence that the F scale measures a meaningful personality dimension is contained in studies that show a positive relationship between measured authoritarianism and overt behavior. Sanford and Rosenstock (51) found that authoritarians tended to reject cartoons which were being used as projective devices. Block and Block (7) reported that authoritarians in an experiment on autokinetic movement submitted more readily to arbitrary demands by the experiments.

Deskins (13) has recently completed a factor analytic study of several scales related to authoritarianism. The F scale appeared with significant loadings on two factors. One factor included high positive loadings on the F scale and religious conventionalism with a negative

loading on a vocabulary scale. The other factor had positive loadings on masculinity (as opposed to femininity), ethnocentrism, political-economic conservatism, and the F scale. These findings tend to support previous studies which suggest that "authoritarianism" is multifactorial and cannot be considered a simple, personality "type."

CHAPTER III

PROBLEM

Theoretical Background for the Problem

Before formulating the problem it seems advisable to summarize the various theoretical approaches and experimental contributions to humor. Freud (23) has probably had the greatest influence on subsequent research, partly because of the breadth of his observations, but also because his "tendency" theory of wit has been enthusiastically accepted by a generation of psychologists interested in revealing the hidden. The work of Sears (54) and others has demonstrated that humor often is used as a socially acceptable device for releasing feelings of superiority, hostility, or sexual desire. However, later work by Berkowitz (6) and Epstein and Smith (17) has demonstrated that the relationship between "tendencies" and humor is not simple and that many factors, such as depth of repression, may be important. Eastman's (16) emphasis on humor as a form of play and as a means for getting pleasure suggest more positive aspects of the humor response, as does Allport's (2) equating of humor with insight. Andrews (4), Cattell (10) and others have verified, through factor

analysis, the importance of tendency humor together with play and pleasure seeking factors. Eysenck (20) has shown that humorous material involves the cognitive, conative and affective aspects of the mind. He also noted the distinction between the appreciation of humor and the production of humor.

The Problem

In delimiting the problem for the present study it was decided to investigate the production or creative aspects of humor rather than appreciation. The latter aspect has been overemphasized. In addition, although appreciation tests of humor measure individual differences in humor preferences they do not reveal a person's readiness and ability to be humorous. In this study it is desired to investigate some of the personality factors involved in "being" humorous.

Many issues and questions that need to be decided are apparent in the review of the humor literature. However, the one general aspect of humor theory that it is desired to investigate in this study is one of emphasis. Both "positive" and "negative" sources of the humor response have been described. That is, humor can be the expression of a constructive, insightful, process that is pleasurable in its own right; or humor can serve as a technique for camouflaging and releasing socially tabooed

conflictual material. In the latter case, humor is the means to an end and the pleasure comes primarily from other sources. It is this "release" or "furtive" aspect of humor which has been most studied and most widely recognized. Freud, (23, p. 801) for example, has referred to humor as "one of the psychic correlates of the flight reflex." Most writers have emphasized this escape function and have given little attention to humor as a possible expression of superior adaptation, as an index of personal adjustment rather than maladjustment, or as a social catalyst rather than a social weapon.

In order to obtain a more accurate evaluation as to the relative importance of these two aspects of humor it should be possible to compare, on a test of readiness and ability to be humorous, subjects having personality characteristics conducive to tendentious humor with subjects having personality characteristics conducive to non-tendentious humor. Results indicating that potentially "tendentious" subjects are the most humorous would tend to support humor theories which emphasize discharge of repressed feelings. Results in favor of the "non-tendentious" group should tend to support "superior adaptation" or "insight" theories. It should be noted that either type of humor may make use of cognitive, conative and affective factors.

A humor test was constructed, consisting of eight incomplete cartoons which depict a variety of interpersonal situations. One student is shown speaking to another, for whom the subject is asked to fill in a humorous reply. The replies are rated for "funniness" by a group of judges. The situations are designed so as to stimulate both cognitive and orectic humor.

The California F scale, or "authoritarianism" scale, was selected as the personality measure because it has been shown to measure the more important cognitive and orectic traits believed to be crucial in various humor theories. Flugel (22, p. 725) has stated, "Authoritarianism in any form seems inimical to humor--and here again is a matter deserving further study." Flugel apparently prefers to view humor as an expression of psychological health rather than pathology. However, the preoccupation with superiority, sex, and aggression found in "authoritarians" should stimulate humorous responses, if humor is primarily tendentious.

Hypotheses

The hypotheses can now be stated.

When subjects classified as low, medial, and high in authoritarianism, as measured by the California F scale, are judged for ability to be humorous on a test involving incomplete cartoons, their relative humor scores will be

as follows:

1. Subjects low in authoritarianism will achieve significantly higher humor scores than will subjects high in authoritarianism.

2. Subjects low in authoritarianism will achieve significantly higher humor scores than will subjects medial in authoritarianism.

3. Subjects medial in authoritarianism will achieve significantly higher humor scores than will subjects high in authoritarianism.

CHAPTER IV

METHOD

Subjects

The original pool of subjects for this experiment consisted of 188 male students at two large universities in southeastern United States. The students were freshmen and sophomores enrolled in beginning classes in psychology, English literature, and sociology. Testing was done during class time and all of the male students present in the classes contacted agreed to serve as subjects. Since the experiment was conducted during the summer session when the number of classes was reduced, the sample represents a sizable proportion of the male students enrolled in these classes at that time. Subjects were selected from the particular classes mentioned because an insufficient number of psychology students were available and it was desired to obtain a relatively homogeneous group of arts and sciences students. This "tender-minded" sample was desired for two reasons: first, the judges of humor were to be psychologists, and second, it was felt that inclusion of subjects from the "tough-minded" disciplines might introduce dissimilarities in interests and training that would tend to dichotomize the sample on a basis other than measured

personality traits. Freshmen and sophomores were used as subjects since it was desired that they be relatively naive with respect to personality tests in general and the F scale in particular. The sample was restricted to males because certain studies (35) have indicated marked sex differences in humor preference which would be difficult to control in an experiment utilizing incomplete cartoons.

Measure of Authoritarianism (California F Scale)

The California F scale has already been described in the review of the literature. The form used is the final form of the F scale (form 45-40) as developed by Adorno et al. (1, p. 225) except that item number 22 was omitted, making a scale of 29 items instead of the original 30. Item number 22, which refers to postwar Germany, has lost its timeliness and has been omitted by other recent experimenters.

The Likert method of scaling (36) was used in construction of the F scale. Subjects are asked to indicate degree of agreement or disagreement with each item according to the following scale:

- +1 slight support, agreement
- +2 moderate support, agreement
- +3 strong support, agreement
- 1 slight opposition, disagreement
- 2 moderate opposition, disagreement

-3 strong opposition, disagreement

Since higher scores are intended to express increasing authoritarianism, the responses are converted into scores as follows:

-3 = 1 point	+1 = 5 points
-2 = 2 points	+2 = 6 points
-1 = 3 points	+3 = 7 points

It will be noted that the scoring skips from 3 to 5 points between -1 and +1. Four points represents the hypothetical neutral response and was assigned when an item was omitted. The authors state that this scheme was used mainly because there seemed to be a greater psychological gap between -1 and +1 responses than between any other adjacent responses. A person's scale score is the sum of his scores on the single items.

The distribution of the F scale scores obtained ($N = 188$) is shown in Figure 1. Curves for actual frequencies and for frequencies smoothed once are plotted. The mean score was 3.549 with a standard deviation of .840. The median was 3.583. The mean score of 3.549 corresponds to a response between -1, slight disagreement, and zero, the hypothetical neutral point. Skewness was calculated as -.144, a value not quite significant at the .05 level. Kurtosis = +.012 (platykurtic), also not significant. Therefore, deviation of this curve from a normal curve can

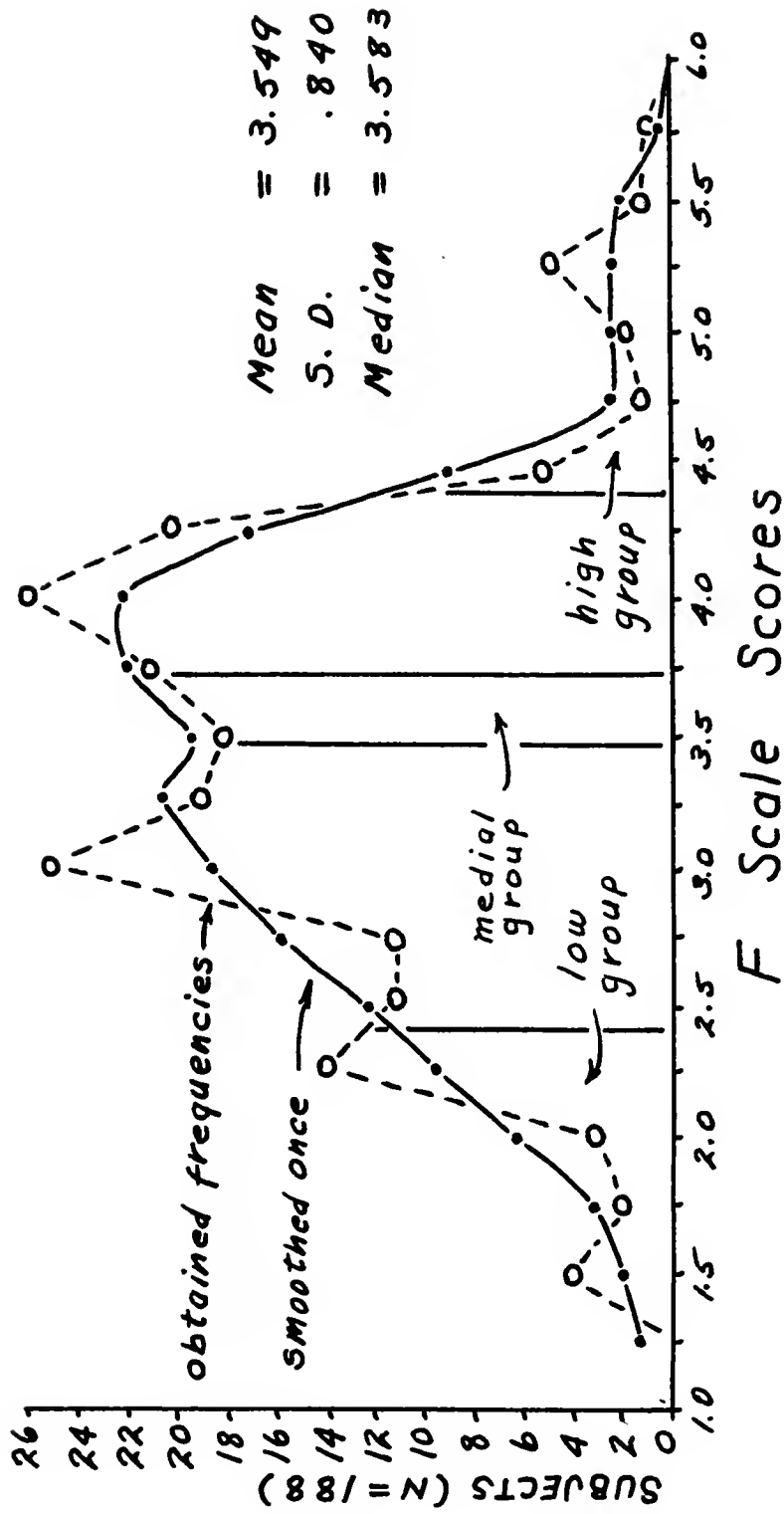


Fig. 1.--Distribution of F Scale Scores

be attributed to sampling errors.

In order to make judging feasible, the cartoon responses of only 60 of the original 188 subjects were used in the main part of the experiment. These 60 subjects were selected according to their total F scale scores as follows:

The 20 subjects scoring highest in authoritarianism (high group).

The 20 subjects scoring "mid-most" in authoritarianism (medial group).

The 20 subjects scoring lowest in authoritarianism (low group).

It was originally intended to compare only the two extreme groups, "highs" and "lows." However, it was decided to include a sample of medial scorers in order to more adequately measure the relationship between humor and authoritarianism over the entire range of F scale scores. For example, it was desired to allow for the possibility that subjects "average" in authoritarianism might be more, or less, humorous than scorers at either extreme.

Although it was noted that the distribution of F scale scores could be treated as a normal curve, there was sufficient negative skewness to affect the relative distances from the mean of the three groups of 20 subjects. Scale score limits and corresponding \bar{z} scores are shown

in Table 1 for each of the three groups.

TABLE 1

SCALE SCORE AND γ SCORE LIMITS OF THE THREE GROUPS
OF SUBJECTS SCORING HIGH, MEDIAL, AND LOW ON
THE F SCALE. (MEAN = 3.549, S. D. = .840)

F Scale Group	Scale Score Limits	Corresponding γ Scores
High (N = 20)	5.897 4.448	+2.80 +1.07
Medial (N = 20)	3.724 3.483	+0.21 -0.08
Low (N = 20)	2.448 1.517	-1.31 -2.42

It can be seen from Table 1 that the inner limits of both extreme groups are greater than 1 S. D. from the mean. However, this value is -1.31 for the low group while it is only 1.07 for the high group. This is not as likely to affect our results as is the difference in relative distances of both extreme groups from the medial group. The γ score distance between the low and medial groups is 1.23; for the high and medial groups it is .86. Therefore, we would expect the medial group to be somewhat closer to the high group than to the low group with respect to the characteristics measured by the F scale.

Humor Test

In the present study, the humorous productions were obtained by means of a cartoon test devised by the experimenter. (The cartoon test is reproduced in Appendix I.) Rosenzweig (50), and Sanford and Rosenstock (51) have used incomplete cartoons as projective devices in which the faces of the various characters are drawn almost without features and are purposely ambiguous as to facial expression. In pretesting with various cartoons for the present study it was found that subjects need the stimulus of a potentially humorous situation, with characters drawn as smiling, in order to respond appropriately. Pretesting also revealed that it is necessary to direct subjects specifically to give humorous responses. (Instructions for subjects are reproduced in Appendix III.) Spontaneous humor would be theoretically of greater interest. However, it was found that in the classroom situation, students are set to treat all tests with deadly seriousness and need to be reassured that they are supposed to give "funny" replies. Humor preference tests, in which the subject is presented with a series of jokes, encounter less difficulty in this respect.

The cartoons were drawn for a college undergraduate sample. An attempt was made to include a representative selection of campus scenes, both academic and recreational.

The "stimulus remarks" used in the cartoons were selected to allow for both cognitive humor, such as puns or plays on words, and the usual range of campus orectic humor, including sex, superiority, and aggression. An attempt was made to avoid frustrating situations of the intensity depicted in the Rosenzweig cartoons. Rather, the scenes were designed with the intention of showing good-natured banter of the sort that can stimulate either "harmless" or tendentious wit. The number of cartoons, eight, was arrived at as a compromise between what was felt to be necessary for reliability and what would constitute a reasonable task for subjects and judges.

Administration of the Tests

The tests were given to the students during the last thirty minutes of one class period. The experimenter administered the tests to eight of the classes and another graduate student in psychology administered the tests to the remaining three classes. (Copies of the instructions for the test administrator and for the subjects are included in Appendix II and Appendix III respectively.) Neither test was timed. Subjects were asked to complete the humor test first before going on to the F scale. This order of presentation was chosen because it was assumed that the cartoon test responses, being projective in

nature, might be markedly influenced by the structured and highly orectic items contained in the F scale. It was felt that any order effects of the cartoon test on the F scale would be less marked, and in any case, the order would be the same for all subjects.

Judging Procedure

In selecting judges for studies in experimental aesthetics there are usually recognized experts to choose from, although it is still necessary to describe in detail the characteristics of the judges, as, for example, an artist's identification with a certain "school." "Experts" in humor, however, are likely to be highly specialized, both in the type of humor that they disseminate and in the type of audiences they attract. In previous studies of humor with college students (19) subjects' preferences have been compared with the results for the group as a whole. The result was a significant lack of agreement as to what was "funny."

In the present study, it was decided to use psychologists as judges for several reasons. Due to the nature of the experiment, the selection of a "large and representative" group of judges was not feasible--if it ever is in the study of humor. Therefore, it was felt that the judges should be a "known" group, fairly homogeneous

with respect to background, interest, and education. It was also desired, due to the complexity of the humor variable, that judges be familiar with rating procedures and skilled in the evaluation of verbal material. Assuming that individual judges demonstrate satisfactory reliability in their ratings, and that significant interjudge agreement is shown, it should be possible to interpret the results in terms of the "known" group. Seven men with Ph. D. degrees in psychology volunteered to serve as judges in the present experiment. Five of the judges were university professors and two were clinical psychologists with the Veterans Administration. The latter two judges have had continuing contact with a campus environment.

The complete instructions for judges is reproduced in Appendix IV. Each judge was given eight packets of cartoon replies. Each packet contained, typed on slips of paper, the 60 replies to one cartoon. The cartoon replies had been given code numbers and had been shuffled. Judges were instructed to shuffle the eight packets before judging in order to control for order effects between cartoons. Shuffling, together with separate coding for each cartoon, controlled for order effects between subjects. Replies were typed to avoid identification through handwriting which might have led to "halo" effects. Each judge worked independently.

Judges were asked to place the 60 slips for each cartoon into four categories: "not funny," "slightly funny," "moderately funny," and "very funny." Each category was to receive 15 slips. Judges were instructed to, "Accept a broad definition of what is humorous and group the replies according to the degree to which they amuse you." Judges then recorded by code numbers their selections for each category. This method of rating has been called by Guilford (27, p. 264) a "defined-group" scale, in which ". . . the judge is given instructions as to what proportions of the samples should be expected to fall in each group."

CHAPTER V

RESULTS

After decoding of the judges' ratings, scoring was done as follows: "not funny" = 0 points, "slightly funny" = 1 point, "moderately funny" = 2 points, and "very funny" = 3 points. Since each judge placed 15 responses in each of these categories for each cartoon, he assigned a total of 90 humor points per cartoon. With eight cartoons, each judge assigned a total of 720 humor points for 60 subjects.

If humor points were distributed according to chance (null hypothesis), each of the three F scale groups should receive 240 humor points per judge, or a total of 1680 points for each group. The results actually obtained are presented in Table 2.

With respect to the total humor scores for the three F scale groups, as shown in Table 2, Chi square was used in order to determine whether or not the obtained results, as a whole, differed significantly from a trichotomy (45, p. 431). The Chi square test ($\chi^2 = 27.56$, $df = 2$, $p = < .01$) indicated that the obtained distribution of humor points can be considered significantly different from a chance, or trichotomous distribution. The testing of the significance of the obtained differences between the groups,

TABLE 2

TOTAL HUMOR POINTS RECEIVED BY SUBJECTS IN THE
LOW, MEDIAL, AND HIGH F SCALE GROUPS

Judge	F Scale Groups		
	Low (N = 20)	Medial (N = 20)	High (N = 20)
1	262	238	220
2	268	240	212
3	264	234	222
4	268	222	230
5	264	240	216
6	263	221	236
7	263	230	227
Total	1852	1625	1563

against the null hypothesis, was also carried out by Chi square, as follows:

1. A Chi square test of the difference in total humor points received by the low and high F scale groups was significant at the .01 level of confidence ($\chi^2 = 24.46$, $df = 1$, $p = < .01$). Therefore, the low group received significantly more humor points than did the high group, a result interpreted as supporting Hypothesis 1 (Above, p. 37).

2. A Chi square test of the difference in total humor points received by the low and medial F scale groups was significant at the .01 level of confidence ($\chi^2 = 14.82$, $df = 1$, $p = <.01$). Therefore, the low group received significantly more humor points than did the medial group, a result interpreted as supporting Hypothesis 2 (Above, p. 37).

3. A Chi square test of the difference in total humor points received by the medial and high F scale groups was not significant ($\chi^2 = 1.2$, $df = 1$, $p = >.20$). Therefore, the difference in humor points received by the medial and high groups could easily have resulted from chance. This result fails to support Hypothesis 3 (Above, p. 37).

The results of the humor ratings, tabulated according to the different scores received by the three F scale groups on each of the eight cartoons, is shown in Table 3.

Inspection of Table 3 reveals that only in cartoons B, E, and H are the ratings in the predicted order of low, medial, and high. These three cartoons were the only ones which, taken singly, discriminated significantly between the low and high F scale groups. The Chi squares were, respectively, 6.40, $p <.05$; 8.84, $p <.01$, and 19.6, $p <.01$. (The remaining Chi squares, none of which were significant, were as follows: A, $\chi^2 = 1.66$, $p >.10$; C, $\chi^2 = .114$, $p >.70$; D, $\chi^2 = 3.12$, $p >.05$; F, $\chi^2 = .186$, $p >.50$;

G, $\chi^2 = .80$, $p > .30$.) However, the direction of the score difference for the low group over the high group is consistent for all cartoons except cartoon C.

TABLE 3

TOTAL HUMOR POINTS RECEIVED BY THE THREE F SCALE GROUPS TABULATED ACCORDING TO CARTOONS

Cartoon ^a	F Scale Groups		
	Low	Medial	High
A	234	189	207
B	237	208	185
C	210	203	217
D	238	191	201
E	244	204	182
F	220	199	211
G	212	224	194
H	257	207	166
Total	1852	1625	1563

^aCartoons as given to the subjects, were numbered from 1 through 8. However, as an aid to the judges, the cartoons were later designated consecutively by letter from A through H.

The distribution curve for the humor ratings is shown in Figure 2. The possible range for each subject was

from 0 (0 points for each cartoon) to 24 (3 points for each cartoon), for any one judge or an average of all judges' ratings. The obtained range for an individual judge's ratings was from 0 to 22 points. The range of the averaged judges' ratings was from 2.57 to 20.0 points. In other words, the judges agreed almost unanimously, in the case of certain subjects, that none of their cartoon responses were funny. Also, there was almost unanimous agreement that some subjects succeeded in giving "very funny" responses to every cartoon.

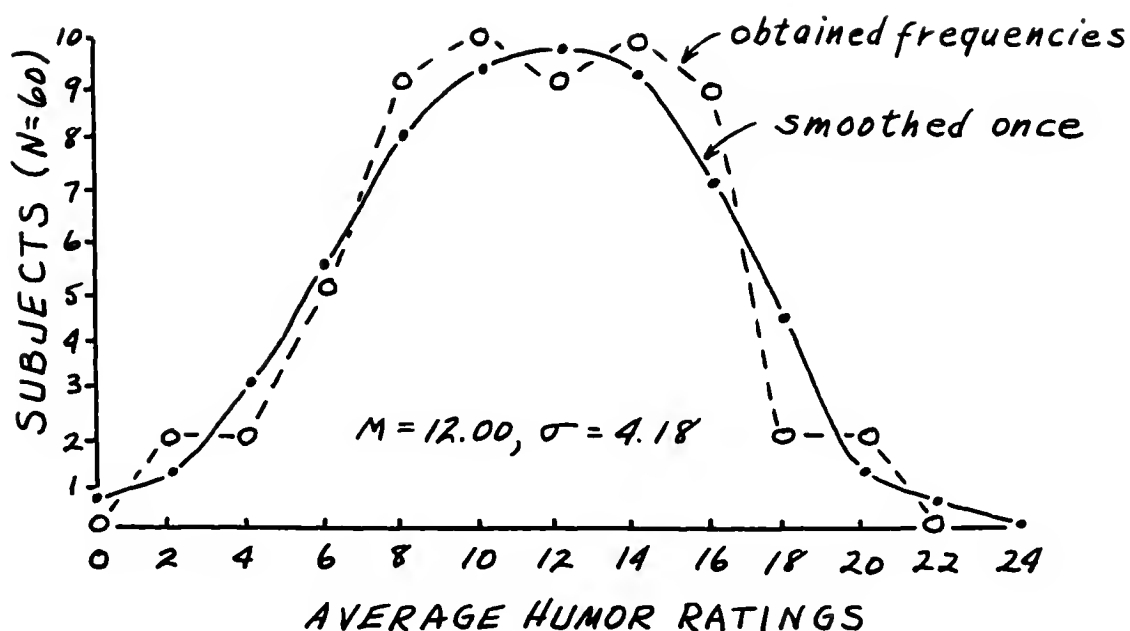


Fig. 2.--Distribution of average humor ratings, showing obtained frequencies and smoothed curve.

In the distribution of humor ratings the mean of 12 was determined by the judging procedure. The standard deviation was 4.18. There was a suggestion of negative skewness ($Sk = -.26$) and of kurtosis ($Ku = +.027$, platykurtic), but neither value was large enough to indicate significant deviation from the normal curve.

The self-reliability of each judge's ratings was calculated by obtaining correlations of his ratings for each subject on cartoons A, D, F, and G with his ratings for cartoons B, C, E, and H. The test was split in this way in order to control for both order and page position effects. The reliability coefficients, corrected by the Spearman-Brown formula, ranged from .50 to .70. The average self-reliability (obtained by using Fisher's z function) was .63. The overall reliability for the test was calculated by the same method used for self-reliabilities, except that the combined ratings of all judges were used. The corrected reliability obtained was .77.

The degree of agreement between the various judges' humor ratings was calculated by obtaining a correlation of each judge's distribution with that of every other judge. The twenty-one interjudge reliabilities ranged from .65 to .83. The average interjudge reliability (obtained by using Fisher's z function) was .73.

In addition to comparing the performances of the

three F scale groups on the humor test, it is possible to approach the results from the standpoint of individual differences. That is, one can determine a subject's position on the humor test and then note his F scale group membership. This has been done in Table 4 for the 10 subjects having the highest, and for the 10 subjects having the lowest, humor ratings.

TABLE 4

F SCALE GROUP CLASSIFICATIONS OF THE TEN "MOST HUMOROUS"
AND THE TEN "LEAST HUMOROUS" SUBJECTS

	F Scale Group Classification		
	Low	Medial	High
Ten "Most Humorous" Subjects	6	2	2
Ten "Least Humorous" Subjects	3	3	4

CHAPTER VI

DISCUSSION

Before discussing the findings which relate directly to the hypotheses it may be advisable to consider some of the secondary findings, such as the reliability of the judges, form of the humor distribution, and the like, which will influence interpretation of the results. The fact that an essentially normal distribution of humor ratings (see Figure 2) was obtained is of interest in itself, since studies of humor preference cast no light on the distribution of "sense of humor." Freud (23, p. 728) has stated, "Wit making is not at the disposal of all, in general, there are but a few persons to whom one can point and say that they are witty" Such statements reflect our admiration for the few "humorists" at the "top" of the distribution without casting any light on the shape of the rest of the curve. Neither the limited nature of the task, the use of extreme groups for subjects, nor the rating method employed suit the present experiment to test for a general "curve" of ability to be humorous. However, in the restricted range of stimulus situations presented in this experiment, and with a homogeneous group of judges,

the ability to be humorous was found to be normally distributed.

The range of "humor talent" appeared to be rather limited in spite of the breadth of the sample. Most of the judges were disappointed at the scarcity of really humorous replies. The judges' ratings of "very funny" were, therefore, relative to the sample and not to their usual standards of humor. In order that the reader can better appreciate the nature and variety of replies, the cartoon responses of four of the subjects have been reproduced in Appendix V.

In the preliminary planning for this experiment the question was frequently raised as to whether or not judges would be able to show any agreement with themselves, or with each other as to judgments of "funniness." Previous research, such as the study by Grziwok and Scodel (26), has shown that judges can reliably differentiate humor content, as, for example, between aggressive and incongruous humor. But ability of judges to agree with each other as to what is "funny" has not been demonstrated. In fact, Eysenck (19) has stressed the absence of "conformity" in humor appreciation. Previous studies, however, have given judges an extremely wide variety of jokes and other varieties of humorous productions from which to select preferences. In the present study, with a more specific task,

judges were able to achieve what would appear to be moderate intrajudge and interjudge reliability, in view of the complexity of the judgments and the briefness of the humor test. Wilson, Guilford, and Christensen (57), using an approach similar to the present study, asked subjects to invent titles for two brief stories. The titles were then rated for "cleverness" on a six-point scale by three judges. Reliabilities of the individual judges ranged from .69 to .77 (range in the present study was .50 to .70); interjudge correlations of ratings ranged from .53 to .76 (range in the present study was .65 to .83); and the reliability computed from the composite ratings was .76 (composite reliability in the present study was .77). It is interesting to note that the reliabilities achieved in rating "humor" compare favorably with the reliabilities found in rating "cleverness," although "cleverness" would appear to be more of a cognitive and less of an affective variable than is humor, and, presumably, more susceptible to reliable measurement. It would also be of interest to know, especially with judges highly trained in verbal skills, what the correlation might have been had the judges rated the same responses for both "cleverness" and "humor."

From the breakdown of the ratings by cartoons, shown in Table 3 (Above, p. 52), it is apparent that some

of the cartoons discriminate between the F scale groups considerably better than do others. Cartoon H, in which the first student is saying, "I'll bet she forgets you when she goes home weekends!", produced the sharpest discrimination. Cartoon C, in which the stimulus words are, "How about lending me five bucks until next week?", was the poorest discriminator. It is difficult to explain these results, although an inspection of the replies offers some clues. Cartoon C seems to stimulate rather abrupt, negative reactions which tend to be stereotyped. The situation, since it involves money, calls for action and not reflection. In addition, the stimulus character in this cartoon was inadvertently drawn with a mildly threatening facial expression, further restricting the affective range of the responses. Cartoon H, on the other hand, presents a stimulus which is much richer in its capacity to elicit the subject's feelings about himself and others. The nature of the responses suggests that "non-authoritarians" were secure enough to be able to use humor as "superior adaptation," whereas the "authoritarians" tended to react with defensive hostility to a degree which inhibited humorous responses. Analysis of the qualitative differences between the humorous replies of high and low F scale group subjects was beyond the scope of the present study. However, some appreciation of the differences in

"tendentiousness" can be gained from the sample responses given in Appendix V.

The principle findings of the experiment were set forth in Table 2 (Above, p. 50). It was noted that the results tended to confirm the predicted superiority in humor scores of the low F scale group over the high and medial groups. However, the score for the medial group was not significantly higher than that for the high group. The failure of this difference to be significant may be related to the negative skewness of the F scale distribution. Although the skewness was not significant, i.e., might result from sampling variations, its effect was real enough in the present experiment, causing the 20 cases grouped around the median to be closer to the high group than to the low group, along the F scale continuum. The results with the medial group are in the predicted direction and the absence of a significant difference between the medial and high groups does not materially influence the findings as a whole. The medial group was included in the experiment primarily as a hedge against the possibility that the person who is "average" in F scale authoritarianism might be the most humorous. The results obtained make it possible to reject this possibility.

In formulating the hypotheses for this study, it was suggested that results showing superiority of the low

over the high F scale group in ability to be humorous could be interpreted as supporting theories which see humor as an index of psychological health, as opposed to theories which view humor as the by-product of repressed conflicts. The question is largely one of emphasis because most authorities have recognized both aspects of humor. But the bulk of the literature has concerned itself solely with humor's function in releasing repressed hostile or sexual impulses. If this were humor's primary function, the high F scale scorers should have had a significant advantage on the humor test. In spite of the impure factorial composition of the F scale, there is substantial evidence that it taps a wide spectrum of tendentious material; that is, partially repressed and socially unacceptable sexual, superiority, and aggressive needs. But the overall results suggest that these needs tend to be associated with below average, rather than above average, humor ability.

One factor that should be considered in interpreting the results of this study is the significant negative correlation between the F scale and measures of intelligence. Correlations of $-.21$ and $-.32$ were previously noted (Above, p. 30). The implications for the present study are difficult to determine because the relationship between humor and intelligence has never been adequately investigated. Freud (23, p. 728) described the sense of

humor as ". . . a special ability, fairly independent of intelligence" Landis and Ross (35) found negligible correlations between their humor test and measures of intelligence. On the other hand, Allport (2, p. 224) has said that to achieve a sense of humor requires ". . . a high level of intelligence." One reason for this lack of agreement may be due to the failure of investigators to distinguish between the cognitive and the orectic aspects of humor. Intelligence is certainly substantially involved in cognition, but presumably to a lesser extent in affection and conation. In the present study an attempt was made to compensate for the frankly verbal nature of the task by the use of cartoons and by selecting stimulus situations designed to tap sources of "tendency humor." However, it is difficult to estimate to what degree the humor scores in this study reflect intellectual ability. To the extent that humor is viewed as an index of healthful adjustment, a positive correlation with intelligence would be expected. However, in view of the fact that intelligence correlates only to a low or moderate degree with either the F scale or with "sense of humor," intelligence is probably a significant but not a determining factor in the present experiment.

An additional question that arises in the present study involves the characteristics of the judges with

respect to the various traits measured by the F scale. Presumably, psychologists tend to be "non-authoritarian" and therefore might tend to favor humorous responses given by the low F scale scorers. In a sense, this begs the question since tendency theory would maintain that a response would be amusing in proportion to its unacceptability. In order to control for such influences one would have to obtain judges with "average" F scale scores; but since the F scale is designed for naive subjects it would not be possible to obtain competent judges in this way. A study by Scodel and Mussen (53) bears on this point. They found that "non-authoritarians" can correctly judge the attitudes of "authoritarians" but that the reverse is not true. Likewise, Epstein and Smith (17), in their study relating to insight and sense of humor, found that ability to judge cartoons accurately was directly related to accuracy of self-evaluation. It would appear that knowledge of the ways in which humor ratings are influenced by the characteristics of the judges will have to be gained from accumulated studies with groups of competent judges who are homogeneous with respect to some variable. It seems unlikely that humor ratings by a "random sample" of the population would be either reliable or meaningful.

Although significant differences in humor scores were obtained between the low and the high, and the low and

the medial F scale groups, it was noted that there was considerable overlap. This is apparent in Table 4 (Above, p. 55) which shows the F scale group classifications for the 10 highest and the 10 lowest scorers on the humor test. Taking the 10 "most humorous" individuals first, it is observed that six came from the low F scale group and two each from the medial and high groups. With respect to Flugel's statement (22, p. 725), "Authoritarianism in any form seems inimical to humor . . .", our results are in general agreement; but the above exceptions indicate that there are wide individual variations. Also, on the basis of the present study, one cannot make the converse of this statement, to the effect that "non-authoritarianism is inimical to the absence of humor." Of the 10 "least humorous" individuals, three came from the low and medial groups and four came from the high group, obviously a chance distribution. The above findings, of course, correspond with common sense observation. Some of our acquaintances, who are liberals in every sense of the word, seem completely lacking in sense of humor. Other people, who seem to combine all of the various negativistic traits that led to the concept of authoritarianism in the first place, may have quite a lively sense of humor. The results of the present study suggest that these cases are exceptions, but until we can explain such inconsistencies our theories of humor are incomplete.

CHAPTER VII

SUMMARY

1. One hundred and eighty-eight university undergraduate male subjects were given the California F scale (Authoritarianism), together with a cartoon test of humor. Sixty experimental subjects were then selected on the basis of their F scale scores: the 20 scoring highest (most authoritarian), the 20 scoring lowest, and the 20 scoring "mid-most" in the distribution. The responses of these 60 subjects were then rated on a four-point scale of relative funniness by seven psychologists who acted as judges.

2. It was predicted that with respect to humor scores: (1) the low F scale group would significantly excel the high group, (2) the low F scale group would significantly excel the medial group, and that (3) the medial F scale group would significantly excel the high group. The obtained differences were tested by Chi-square. Differences were significant and in the predicted direction with respect to hypotheses (1) and (2). The difference for hypothesis (3) was in the expected direction but was not significant.

3. The results were interpreted as tending to

support theories of humor which emphasize the adaptive, as opposed to the pathological, aspects of humor. Possible biasing factors noted were the negative correlation of the F scale with intelligence and the use of judges who probably tend to be nonauthoritarian. Wide individual differences in humor ability for subjects in all three experimental groups were noted.

4. Corrected split-half intrajudge reliabilities for the humor ratings ranged from .50 to .70. Interjudge reliabilities ranged from .65 to .83. Composite reliability for the test was .77. These results were interpreted as suggesting that humorous productions are susceptible to being rated with satisfactory reliability and interjudge agreement if a homogeneous group of judges is used.

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INSTRUCTIONS: IN
TALKING. THE WO
YOURSELF IN THE
RESPOND. WRITE

1.

WHY DON'T
YOU HAVE
A DATE
FOR THE
PARTY?



APPENDIX I. HUMOR TEST^a

INSTRUCTIONS: IN EACH OF THESE PICTURES TWO COLLEGE STUDENTS ARE TALKING. THE WORDS SAID BY ONE STUDENT ARE ALWAYS SHOWN. IMAGINE YOURSELF IN THE OTHER STUDENT'S PLACE AND THINK OF HOW YOU MIGHT RESPOND. WRITE YOUR REPLY IN THE EMPTY BOX.



CONT'D →

^aThis is a facsimile of the humor test. The original tests given to the subjects were duplicated on standard 8½ by 11 inch paper.

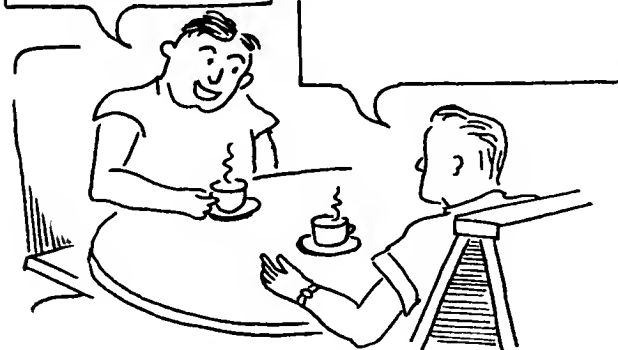
5.



7.

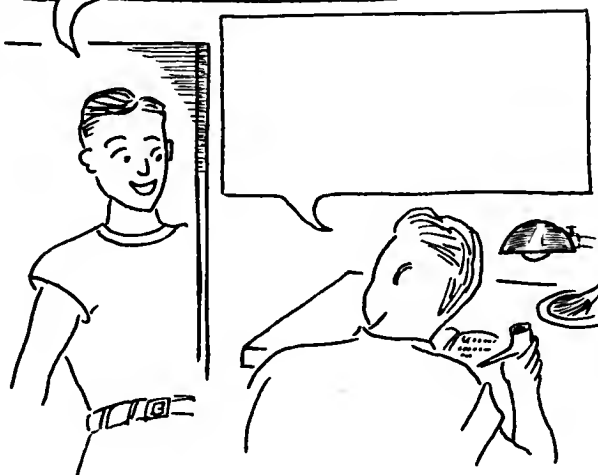
5.

WHO WOULD
WANT TO BUY
THAT OLD JALOPY
OF YOURS?



6.

IT IS MOST GRATIFYING
TO OBSERVE YOUR SUDDEN
INTEREST IN STUDYING!



7.

DON'T YOU
WISH YOU
WERE ON
THE TEAM?



8.

I'LL BET SHE
FORGETS YOU
WHEN SHE
GOES HOME
WEEKENDS!



APPENDIX II. INSTRUCTIONS FOR TEST ADMINISTRATORS

Subjects are to be MALE undergraduates. Most subjects complete the tests in 20 minutes; a few will take 25. It is probably most convenient to use the last 30 minutes of a class period, allowing 5 minutes for passing out the tests and reading instructions.

First hand each subject a copy of the F scale, asking subjects to leave them face down. Then hand him the cartoon test, face up. (This is done readily if tests are previously sorted back to back.) As the tests are being passed out, ask the subjects to write their names on both tests.

Due to the nature of the research, the distributing of the tests and the reading of instructions should preferably be handled as informally as possible. Fortunately, some students help to set the mood by laughing when they see the cartoons.

APPENDIX III. INSTRUCTIONS FOR SUBJECTS

These tests that you have been given are part of a research study being conducted by a graduate student. These tests are not a part of your regular course work and most students find them interesting. Please check to see that your name is on both tests. All names will later be changed to code numbers and results will be used only for research.

When you have completed the cartoon test, turn over the second test, which is a list of statements to be rated, and complete it. Neither test is timed, but each one should take only 10 minutes. After 10 minutes I will remind you to go on to the second test.

Now, with respect to this cartoon test. In filling in the cartoons, the idea is to give humorous replies! If you can't think of a humorous reply, fill in an appropriate response and go on to the next cartoon. Be natural, but try to think of humorous replies. All right, go ahead.

APPENDIX IV. INSTRUCTIONS FOR JUDGES

You are being asked to rate for "funniness" the responses of sixty subjects to a humor test consisting of eight incomplete cartoons. Replies have been given code numbers, shuffled, and assembled separately for each cartoon. The sixty replies for each cartoon are judged and the results recorded before proceeding to the next cartoon. Materials to be used include:

- (1) Eight packets, lettered from A through H. Packet A contains the sixty replies to cartoon A; Packet B, the sixty replies to cartoon B, etc.
- (2) A sample copy of the cartoon test.
- (3) A set of eight recording sheets, one for each cartoon, for use in recording the judge's ratings.

Procedure

Thoroughly shuffle the eight unopened packets of cartoon responses, leaving them face down in a pile. As judging proceeds, select one packet at a time from the top of the pile. After finishing with each packet and recording the results, replace packet face up at bottom of pile.

Each packet contains the 60 responses to one cartoon. Remove slips and shuffle thoroughly. Take slips one at a time and place them, face up, into four categories; from left to right--Not funny, Slightly funny, Moderately funny, and Very funny. After slips have been distributed according to your first impressions, glance over them again and rearrange them so as to have 15 slips in each category. In rating the replies, accept a broad definition of what is humorous and group the replies according to the degree to which they amuse you.

After each group of 60 replies has been rated, there should be four piles of 15 replies each. Take the "Not funny" pile first, turn it over, and record the code numbers (omitting the letter) by marking short lines

through the appropriate numbers under the "Not funny" column on the recording sheet. Repeat for the other three columns and make sure that the letter designating the cartoon is entered at the top of the blank. Then recombine the 60 slips, shuffle, and replace in the packet. Proceed to the next cartoon.

After all eight packets have been judged, check the recording sheet for completeness and place in the envelope provided and seal. It requires from 20 to 25 minutes to judge and record each packet and total judging time will be from 3 to 3½ hours. Therefore, it is suggested that judging be done in two or more sessions.

APPENDIX V. SPECIMENS OF HUMOR TEST RESPONSES

1. Cartoon responses of a subject from the low F scale group who scored high (rank order 1.5) in the humor test.

<u>Cartoon</u>	<u>Response</u>
A	"My Cadillac broke down and I doubt if my date would consent to ride in a Chevrolet."
B	"My answers were so intelligent and abstract that the professor was unable to grasp their significance."
C	"I would . . . except my father broke his leg and is incapacitated, my mother was laid off her job, and I lost money in a poker game, and as a result have \$3.00 left for the next two weeks."
D	"If it didn't require that I be blind or the lights out to enjoy her company."
E	"Any person who appreciates ageing and mellow-ness, plus a high degree of mechanical under-standing, and not interested in superficial looks."
F	"Does this mean <u>you</u> are going to take over my folks' job of supporting me, or do <u>you</u> need a tutor?"
G	"No, who wants to be B. M. O. C. and have all those beautiful girls running after you, and receive free tuition, board, etc."
H	"Yes, she is probably very engrossed in her col-lection of shrunken heads and her deciphering of Egyptian heiroglyphics."

2. Cartoon responses of a subject from the low F scale group who scored low (rank order 56) in the humor test.

<u>Cartoon</u>	<u>Response</u>
A	" No money! "
B	"I failed to study."
C	"When, next week?"
D	"What's she like? Have you met her?"
E	"I'm giving it away."
F	"O. K. 'Prof,' beat it."
G	"I wish I could play that good but I don't think I'd like to be on a school team."
H	"She couldn't forget <u>me</u> ."

3. Cartoon responses of a subject from the high F scale group who scored high (rank order 5) in the humor test.

<u>Cartoon</u>	<u>Response</u>
A	"Who in hell would have me? I couldn't get a date on a Saturday night at the YWCA with \$10 bills sticking out of my ears."
B	"Instead of looking over my notes, I over-looked them."
C	"If I had five bucks I would stay up all night looking at it."

- D "Yes, but if she is a dog I'm going to blind you."
- E "Oh, I'll find some blind guy."
- F "I have to or I'll be digging ditches for a living."
- G "Yeh, the team of Martin and Lewis--at least I would have a few bucks."
- H "Well, don't you think the mouse (me) will play when the cat is away?"

4. Cartoon responses of a subject from the high F scale group who scored low (rank order 58) in the humor test.

<u>Cartoon</u>	<u>Response</u>
A	"Because my wife does not want to go and she won't let me go with anyone else."
B	"I'm not sure what happened. They seemed quite funny to me."
C	"I'm sorry, but I do not have that much with me."
D	"I'm a married man, but thanks anyway."
E	"Anyone who is in need of cheap transportation."
F	"You bet, I have to because of my low grades last semester."
G	"I sure do. I have always wanted to play but never got the chance."

- H. "You should not say things like that unless you know what you are talking about. Encourage, do not discourage."

BIOGRAPHY

Robert Scott Cleland was born January 16, 1920, at Pittsburgh, Pennsylvania. He received the Bachelor of Arts degree from Monmouth College in 1941. After serving in the navy he worked for several years in industry. During this period he did graduate work at Northwestern University. He entered the graduate school of the University of Florida in 1949 and received the Master of Arts degree in psychology in September, 1950. He is a member of the American Psychological Association.

June 3, 1957

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